WHAT IS CLAIMED IS:

1. A method for delivering a therapeutic gas to a patient having a mouth and a nose, said method comprising:

generating a flow of a therapeutic gas; and

infusing a nasal and/or an oral mucous membrane with the flow of therapeutic gas;

wherein the patient refrains from inhaling the therapeutic gas.

2. A method for delivering a therapeutic gas to a patient, said method comprising:

generating a flow of a therapeutic gas; and

infusing an ocular mucous membrane with the flow of therapeutic gas.

3. A method as in claim 1 or 2, wherein the therapeutic gas is selected from the group consisting of carbon dioxide, nitric oxide, oxygen, helium, dilute mixtures of nitric oxide, and isocapnic mixtures of acid gases.

4. A method as in claim 3, wherein the therapeutic gas consists essentially of carbon dioxide.

5. A method as in claim 3, wherein the carbon dioxide is present in a carrier gas.

6. A method as in claim 3, wherein generating comprises generating a flow at a rate in the range from 0.5 cc/sec to 20 cc/sec carbon dioxide.

7. A method as in claim 6, wherein the gas flow is continued for from 1 to 100 seconds.

8. A method as in claim 7, further comprising at least a second infusing step which is continued for from 1 to 100 seconds.

9. A method as in claim 8, further comprising at least a third infusing step which is continued for from 1 to 100 seconds.

10. A method as in claim 1, wherein infusing comprises directing the flow of therapeutic gas to one nostril and allowing the flow to exit through the other nostril and/or the mouth.

11. A method as in claim 10, wherein the patient's mouth is closed and the flow exists entirely from the other nostril.

12. A method as in claim 1, wherein infusing comprises directing the flow of therapeutic gas to the mouth and allowing the flow to exit through at least one nostril.

13. A method as in claim 12, wherein infusing comprises directing the flow of therapeutic gas to at least one eye.

14. A method as in claim 1 or 2, further comprising adjusting the flow rate of the gas to a level which the patient perceives is comfortable.

15. A method as in claim 14, further comprising adjusting the duration of treatment in response to changes in the gas flow rate, where decreases in flow rate result in an increase in treatment time.

16. A method for generating a therapeutic dosage of a gas, said method comprising:

releasing from a hand-held dispenser a flow of therapeutic gas comprising from 0.5 cc/sec to 20 cc/sec, when the gas is selected from the group consisting of carbon dioxide, nitric oxide, oxygen, helium, dilute mixtures of nitric oxide, and isocapnic mixtures of acid gases.

17. A method as in claim 16, wherein the gas flow consists essentially of carbon dioxide.

18. A method as in claim 16, wherein the gas flow comprises carbon dioxide in a carrier gas.

19. A method as in claim 16, wherein the treatment gas comprises a compound and a carrier gas, wherein the compound and carrier gast interact.

20. A method as in claim 19, wherein the carrier gas is selected from the group consisting of air, oxygen, nitrogen, and halogenated hydrocarbons.

21. A method as in claim 16, wherein the hand-held dispenser has an outlet that is suitable for sealing against a human nostril.

22. A method as in claim 16, wherein the hand-held dispenser has an outlet that is suitable for sealing against a human mouth.

23. A method as in claim 16, wherein the hand-held dispenser has an outlet that is suitable for sealing over a human eye.

24. A method as in claim 16, wherein the gas flow is continued for from 1 to 100 seconds.

25. A method as in claim 24, further comprising at least a second releasing step which is continued for from 1 to 100 seconds.

26. A method as in claim 25, further comprising at least a third releasing step which is continued for from 1 to 100 seconds.

27. A method as in claim 16, wherein releasing comprises adjusting the flow rate to a set point within the 0.5 cc/sec to 20 cc/sec range.

28. A dispenser for delivering a therapeutic gas, said method comprising:

a container holding a volume of the therapeutic gas under pressure;

a flow regulator that releases a flow of the therapeutic gas from the container;

and an outlet that seals against a human nostril.

29. A dispenser as in claim 28, wherein the therapeutic gas is selected from the group consisting of carbon dioxide, nitric oxide, oxygen, helium, dilute mixtures of nitric oxide, and isocapnic mixtures of acid gases with a carrier gas.

30. A dispenser as in claim 29, wherein the therapeutic gas consists essentially of carbon dioxide.

31. A dispenser as in claim 29, wherein the treatment gas comprises a compound and a carrier gas, wherein the compound and the carrier gas interact.

32. A dispenser as in claim 28, wherein the therapeutic gas comprises carbon dioxide in a carrier gas.

33. A dispenser as in claim 29, wherein the flow regulator is adjustable so that the user can select a flow rate in the range from 0.5 cc/sec to 20 cc/sec.

34. A dispenser as in claim 33, wherein the container comprises a cylinder, the adjustable flow regulator comprises a head at one end of the cylinder, and the outlet comprises a nozzle in the head.

35. A dispenser as in claim 34, wherein the head is axially translatable and carries a needle that perforates a sealing cap in the cylinder to form a flow-regulating orifice in the cap.

36. A dispenser as in claim 34, wherein the head is axially translatable and carries a needle that perforates a sealing cap in the cylinder, wherein flow is controlled by a previously formed orifice in the head.

37. A dispenser as in claim 34, wherein the head is rotatable to effect axial translation.

38. A dispenser as in claim 37, wherein the head comprises detents which permit selection of predefined flow rates.

39. A dispenser for delivering carbon dioxide, said method comprising:
a container holding a volume of carbon dioxide under pressure; and
a flow regulator that releases a flow of the carbon dioxide from the container at a rate in the range from 0.5 cc/sec to 20 cc/sec.

40. A dispenser as in claim 39, further comprising of an outlet that seals against a human nostril.

41. A dispenser as in claim 39, further comprising an outlet that seals against a human mouth.

42. A dispenser as in claim 39, further comprising an outlet that seals against a human eye.

43. A dispenser as in claim 39, wherein the carbon dioxide is substantially pure.

44. A dispenser as in claim 39, wherein the carbon dioxide is present in a carrier gas.

45. A dispenser as in claim 39, wherein the carbon dioxide is present in the container as a liquid.

46. A dispenser as in claim 39, wherein the carbon dioxide is present in the container as a pressurized gas.

47. A dispenser as in claim 39, wherein the flow regulator is adjustable so that the user can select a flow rate in the range from 0.5 cc/sec to 20 cc/sec.

G27> 48. A dispenser as in claim 39, wherein the container comprises a cylinder, the adjustable flow regulator comprises a head at one end of the cylinder, and the outlet comprises a nozzle in the head.

49. A dispenser as in claim 48, wherein the head is axially translatable and carries a needle that perforates a sealing cap in the cylinder to form a flow-regulating orifice in the cap.

G28> 50. A dispenser as in claim 48, wherein the head is axially translatable and carries a needle that perforates a sealing cap in the cylinder, wherein flow is controlled by a previously formed orifice in the head.

51. A dispenser as in claim 48, wherein the head is rotatable to effect axial translation.

52. A dispenser as in claim 51, wherein the head comprises detents which permit selection of predefined flow rates.

G29> 53. A kit comprising:

a container holding a therapeutic gas; and

instructions for use setting forth a method for delivering the therapeutic gas to a patient from the container comprising:

generating a flow of the therapeutic gas; and

infusing a nasal and/or an oral mucous membrane with the flow of therapeutic gas, wherein the patient refrains from inhaling the therapeutic gas.

54. A kit comprising:

a hand-held container holding carbon dioxide; and

instructions for use setting forth a method for delivering the carbon dioxide from the container to a patient comprising:

releasing from the hand-held container a flow of carbon dioxide comprising from 0.5 cc/sec to 20 cc/sec of carbon dioxide.

55. A container as in claim 54 wherein the instructions further set forth to direct the carbon dioxide to a nostril or mouth of the patient while the patient refrains from inhaling the carbon dioxide.

56. A treatment gas supply system comprising:

a hand-held nozzle having an outlet that seals against a nostril or mouth or eye of a patient;

an adjustable flow control regulator that is adjustable to a flow rate in the range from 0.5 ml/sec to 20 ml/sec when connected to a source of pressurized treatment gas; and

a hose connectable at one end to the nozzle and at another end to a source of the therapeutic gas.

57. A treatment gas supply system as in claim 56, further comprising a flow meter in the line with the nozzle to permit a user to adjust flow rate to a desired value while observing the flow meter.

58. A kit comprising:

a container holding a therapeutic gas; and

instructions for use setting forth a method for delivering the therapeutic gas to a patient from the container comprising:

generating a flow of the therapeutic gas; and

infusing an ocular mucous membrane with the flow of therapeutic gas.

59. A gas dispensing needle comprising:

a needle body having a penetrating tip, a proximal conical shaft, and a flow passage between the shaft and an orifice in the penetrating tip;

wherein the tip region has an angle of convergence greater than 25°; and

wherein the conical shaft has an angle of convergence of the range from 2° to 6°.

60. A gas dispensing needle as in claim 59, wherein the penetrating tip region extends over a length in the range from 0.6 mm to 1 mm and the conical shaft region extends over a length in the range of 0.2 mm to 0.6 mm.